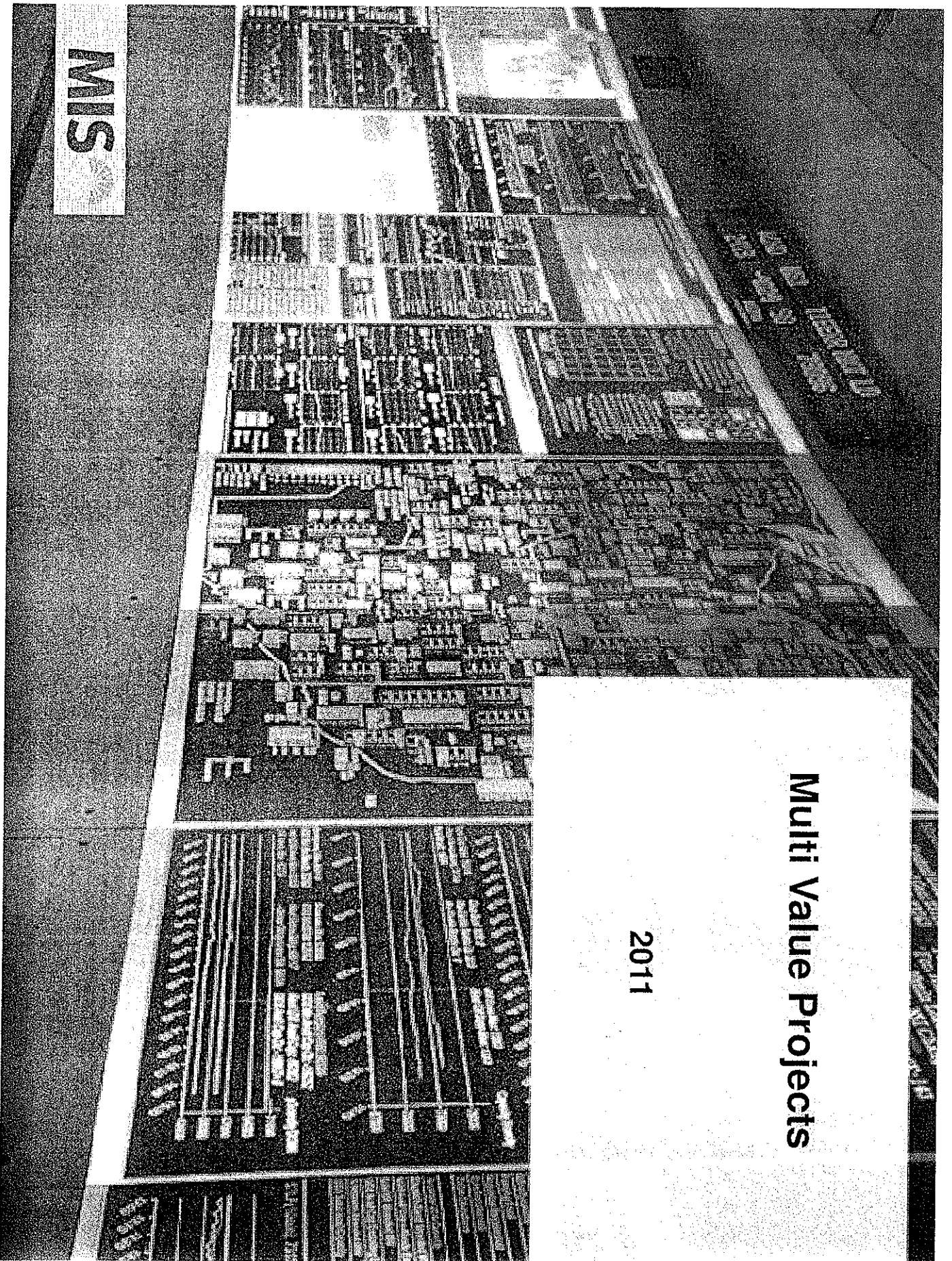


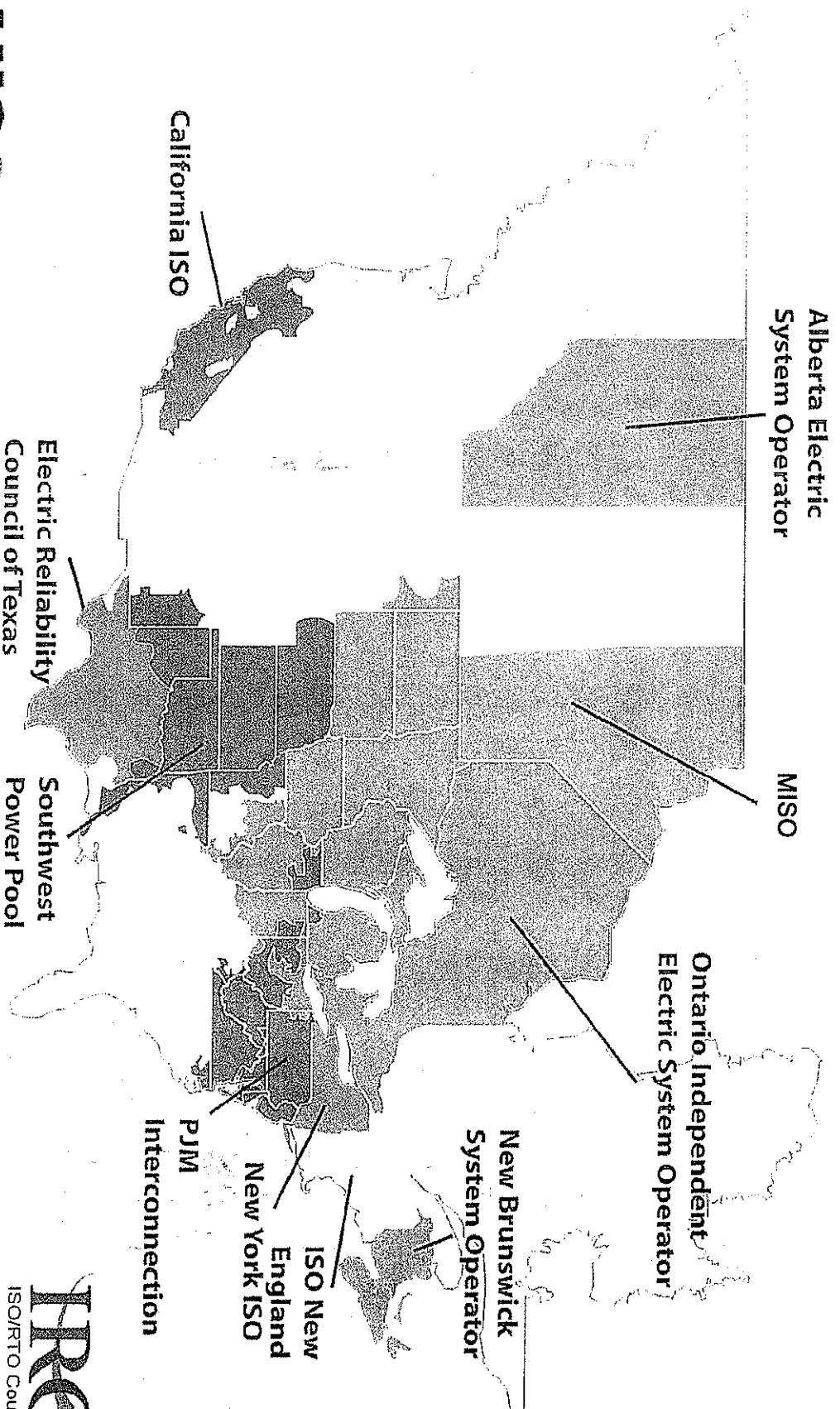
# Multi Value Projects

2011

MIS



# North American RTOs



# The MISO's role is concentrated in a few key areas

## What We Do

Provide independent transmission system access

Deliver improved reliability coordination through efficient market operations

Coordinate regional planning

Provide price information transparency

## Implications

- > Equal and non-discriminatory access
- > Eliminate transmission rate pancaking (stacked fees)

- > Improved regional coordination
- > Independent lowest cost unit commitment, dispatch and congestion management

- > Integrated system planning
- > Balance transmission and generation tradeoffs

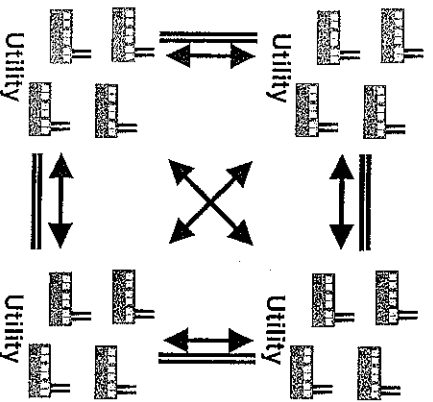
- > Market price/value discovery
- > Encourage prudent infrastructure investment



# Transmission Objective Function Varies Based on Construct

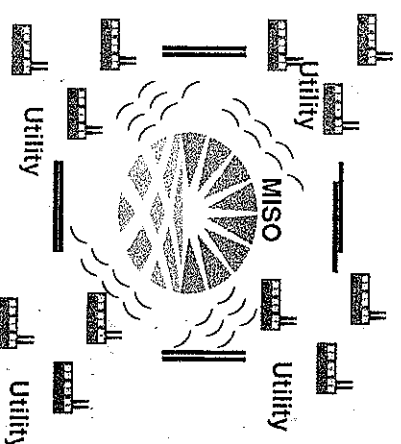
## Pre-Market



- Match my generation to my load (decentralized unit commitment and dispatch)
- Value comes from a utility's own units
- Objective: Minimize cost of transmission investment



## Post-Market

- Access generation in the market (centralized unit commitment and dispatch)
- Value comes from accessing cheaper generation
- Objective: Lowest wholesale energy cost



 = Transmission Lines  
 = Bilateral Agreements

# MISO Planning Objectives

Fundamental  
Goal

The development of a comprehensive expansion plan that meets reliability needs, policy needs, and economic needs

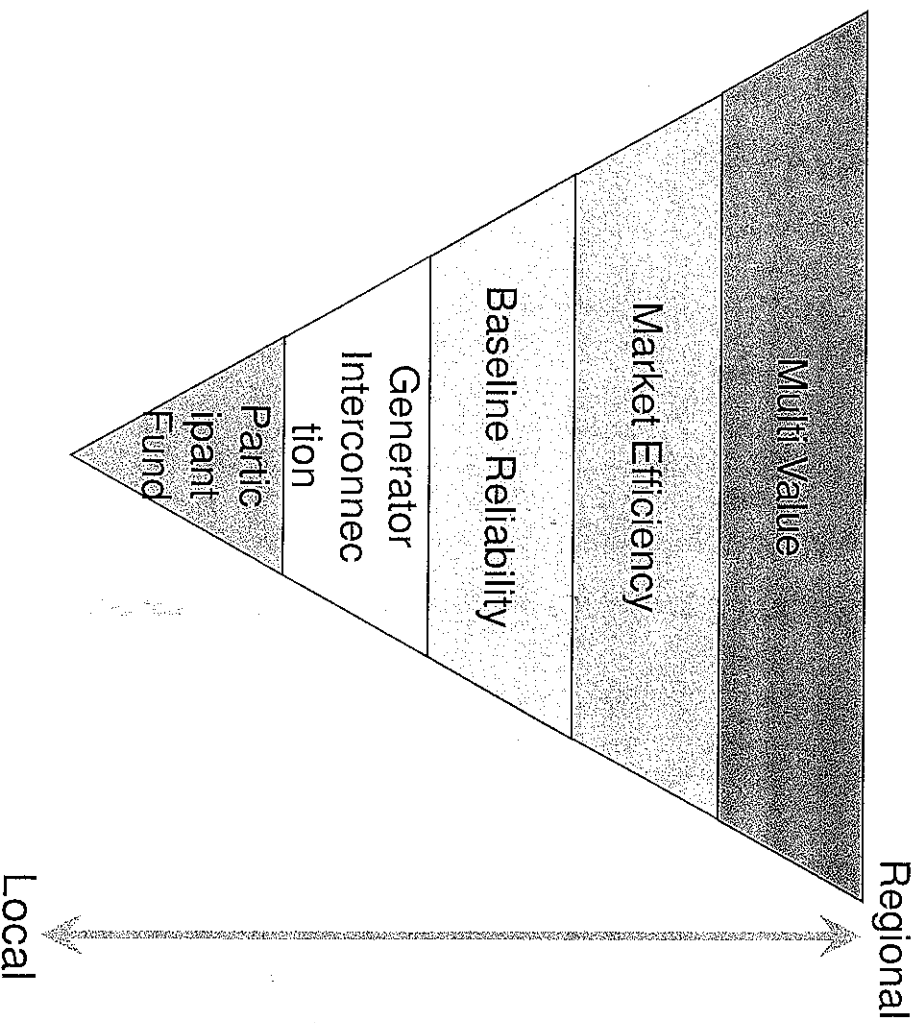
MISO  
Board of  
Director  
Planning  
Principles\*

- **Make the benefits of an economically efficient energy market available to customers by providing access to the lowest electric energy costs**
- Provide a transmission infrastructure that safeguards local and regional reliability and supports interconnection-wide reliability
- Support state and federal energy policy objectives by planning for access to a changing resource mix
- Provide an appropriate cost mechanism that ensures the realization of benefits over time is commensurate with the allocation of costs
- Develop transmission system scenario models and make them available to state and federal energy policy makers to provide context and inform the choices they face



\* As modified and approved by MISO Board of Directors System Planning Committee  
5/16/2011; pending full board approval

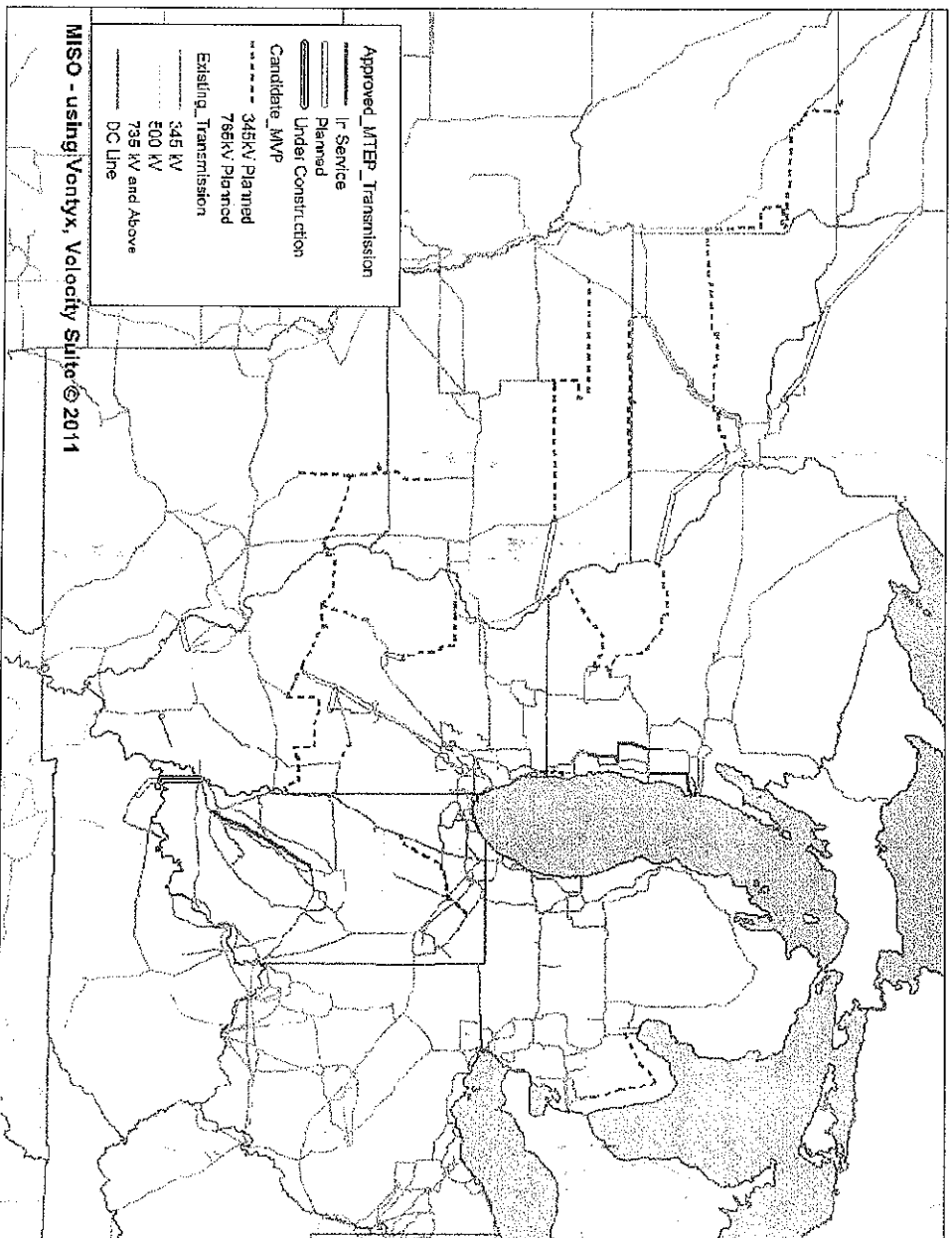
# Planning and Cost Allocation are Inextricably Linked



**Cost Allocation approach matches the business case (i.e. benefits) with the spread of dollars**

- Benefits of Multi-Value Projects (MVPs) are spread regionally consistent with the widespread benefits from regional plan
- Economic benefits of Market Efficiency Projects spread farther beyond the local zone
- Reliability benefits of Baseline Reliability Projects primarily stay in the zone in which the reliability issue exists
- Generator Interconnection Projects paid primarily by Interconnection Customer
- Participant funded projects are paid by the party proposing the project

# Candidate MVPs Enhance the Regional Nature of the Grid

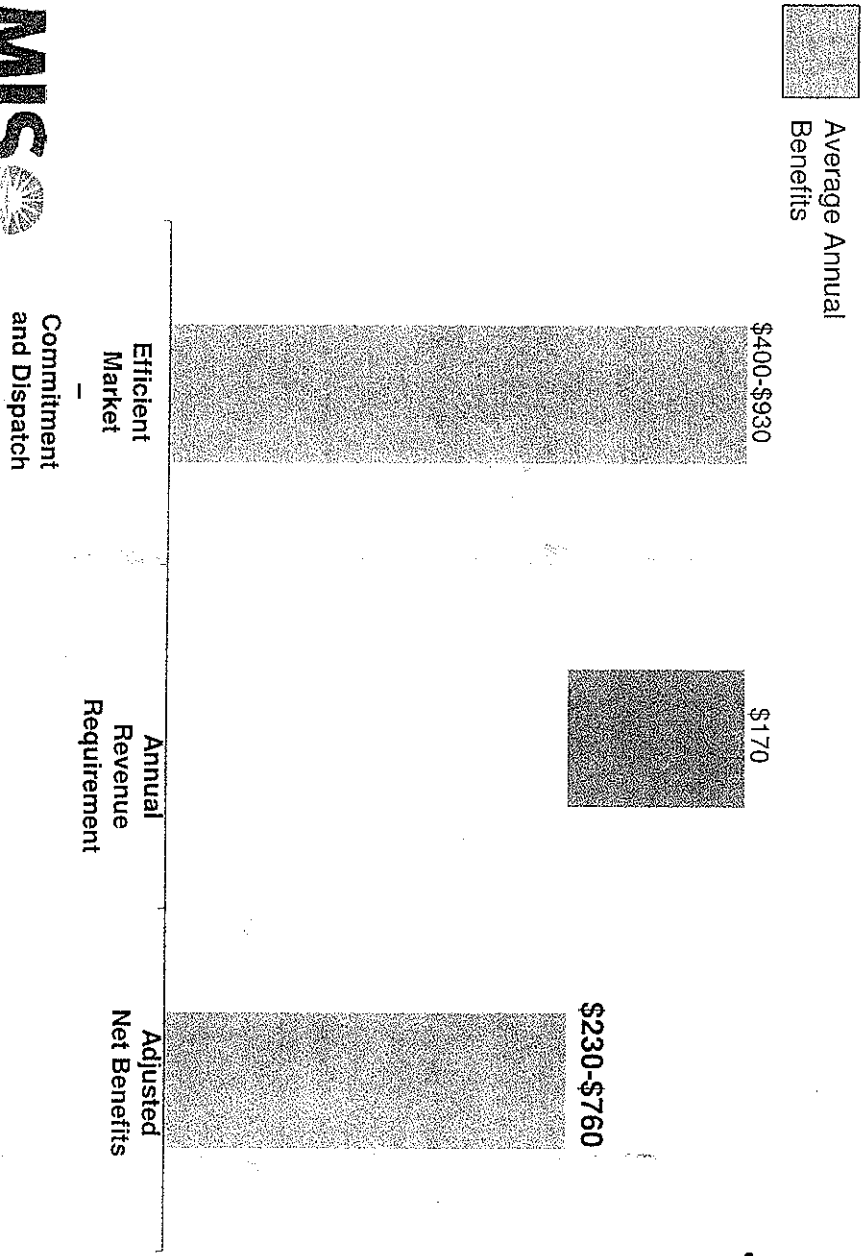


Candidate MVPs combined with the existing system and other planned projects increase transfer capability throughout the footprint, offering increased access to import and export power



# Transmission Provides Benefits to Michigan Along All Aspects of the Value Proposition

East Region Benefit by Value Driver<sup>1</sup>  
(in \$ millions)



- Aggregate of wind generation lowers prices across the footprint given sufficient transmission
- In addition to production cost savings, additional benefits will be realized
  - A more robust system improves reliability
  - Increasing transfer capability increases the size of the risk pool resulting in lower ancillary services costs and overall capacity costs